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(71)Applicant : SHARP CORP

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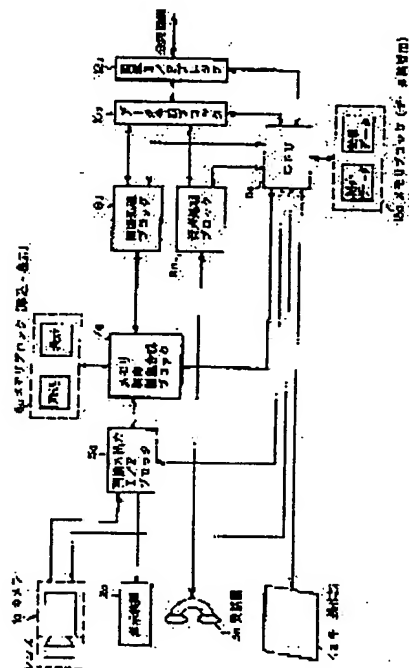
(72)Inventor : NAITO MASAYUKI

(54) VOICE/IMAGE TRANSMITTER

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a device, with which configuration is simplified in comparison with a conventional device, convenience is improved and required information can be speedily transmitted, concerning a voice/image transmitter for exchanging information through speaking in voice and the transmission of image.

SOLUTION: This device is provided with processing means for signals and data equipped with voice and image input/output means 1a, 2a and 3a, transmitting/receiving means 10a, 11a and 12a for voice/image data through a communication line, and storage parts 6a and 13a for voice/image data for transmitting input/output signals and transmitted and received voice/image data. In this case, data consisting of a display picture are prepared by synthesizing the document information of business card, etc., provided through the contact shooting of video camera 1a as the input means for image with the graphic information of figure image, etc., and this synthesized picture is displayed at the destination of speaking. Besides, image data are filed together with a telephone number so as to be retrieved and automatically transmitted.



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CLAIMS

[Claim]

[Claim 1] While it has the storage section of voice and the image data transmitted and received in voice and the I/O means of a picture, the transceiver means of voice and the image data transmitted and received through a communication line, and the I/O signal of the aforementioned I/O means and the aforementioned transceiver means In the voice and the picture image transmission equipment which has a processing means to perform processing of this I/O signal, or this voice and image data The picture camera and display unit which have the lens which can be close photographed as an I/O means of the aforementioned picture are used. the aforementioned processing means The voice and the picture image transmission equipment characterized by creating the data which compound the document informations, such as a card, and the graphic informations, such as a person image, which are acquired by close-up photography of the aforementioned picture camera, and constitute one screen in the aforementioned display unit, and transmitting the data.

[Claim 2] The aforementioned processing means is the voice and the picture image transmission equipment of the claim 1 publication characterized by storing this received static image temporarily to the following reception while the data which constitute the aforementioned synthetic screen are used as a static image.

[Claim 3] The voice and the picture image transmission equipment of the claim 2 publication characterized by enabling it to communicate by filing the aforementioned static image stored temporarily together with the identification code of the transmission origin of this static image, and searching the filing after a reception.

[Claim 4] The voice and the picture image transmission equipment of the claim 3 publication characterized by for the aforementioned filing being constituted by the picture image which compounded the plurality of the picture image of only the aforementioned graphic information, and using it as display screen at the time of the aforementioned reference.

[Translation done.]

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PAT-NO: JP409200712A
DOCUMENT-IDENTIFIER: JP 09200712 A
TITLE: VOICE/IMAGE TRANSMITTER

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INVENTOR-INFORMATION:

NAME

NAITO, MASAYUKI

ASSIGNEE-INFORMATION:

NAME

COUNTRY

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ABSTRACT:

PROBLEM TO BE SOLVED: To provide a device, with which configuration is simplified in comparison with a conventional device, convenience is improved and required information can be speedily transmitted, concerning a voice/image transmitter for exchanging information through speaking in voice and the transmission of image.

SOLUTION: This device is provided with processing means for signals and data equipped with voice and image input/output means 1a, 2a and 3a, transmitting/receiving means 10a, 11a and 12a for

voice/image data through a communication line, and storage parts 6a and 13a for voice/image data for transmitting input/output signals and transmitted and received voice/image data. In this case, data consisting of a display picture are prepared by synthesizing the document information of business card, etc., provided through the contact shooting of video camera 1a as the input means for image with the graphic information of figure image, etc., and this synthesized picture is displayed at the destination of speaking. Besides, image data are filed together with a telephone number so as to be retrieved and automatically transmitted.

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DETAILED DESCRIPTION

[Detailed description]

[0001]

[The technical field to which invention belongs] this invention relates to the picture image transmission equipment which transmits and receives image data and voice data in a detail using a communication line more about a picture image transmission equipment.

[0002]

[Prior art] although the technique of also carrying out transmission and reception of a picture image, the technique of connecting a picture image and voice simultaneously, etc. obtain conventionally in the picture image transmission equipment which transmits and receives image data and voice data using a communication line after talking over the telephone only with voice. It was difficult for having a transmitting person's face and the telephone number memorized to an addressee only by talking over the telephone at once, therefore I had the addressee take a memorandum and the text character was put into the picture image by the transmitting side or the receiving side. As technique of putting in this text, there are technique of putting in by the receiving side and the technique of putting in by the transmitting side. As technique of putting in a character by the receiving side, a superimposition or synthesis is carried out for the alphabetic data generated in the character occurrence section to a receiving picture image. the alphabetic data which the picture image a photograph of was taken with the camera was made to generate in the character occurrence section as technique of putting in a character by the transmitting side -- a superimposition -- or it compounded, and it sent as image data and had sent as an alphabetic data apart from image data.

[0003] Moreover, what is filed may be used as a picture image used for such a picture image transmission equipment. When a picture image is filed, an addressee needs to choose and file a picture image, and for that purpose, the memory for storing the picture image of many sheets temporarily is carried, and it chooses from them and files. Or the picture image I had the partner send during a telephone call is chosen, and it is filed. filing the alphabetic data generated in the above character occurrence sections although additional information, such as an account number of **, is added together with image data at the time of a filing **** -- image data -- an alphabetic data -- a superimposition -- or after compounding, it filed. In order to make to search although the picture image to file is searched, it was keeping on record together with the picture image which creates the small screen of a picture image independently and files it. This small screen makes small a picture image from the first, such as usually thinning out the picture image to file and making it small.

[0004]

[Object of the Invention] In the above-mentioned conventional technique, it was confused by the addressee that I have a transmitting person's face, identifier, and the telephone number memorized to an addressee, and I had the memorandum taken, or the text character was put into the picture image by the transmitting side or the receiving side, and it was very user-unfriendly. moreover, when putting a text character into a picture image, by the technique of generating a character in the character occurrence section, as mentioned above. Although the input technique of the character displays 50 sound on an input and a screen from a keyboard and has from there an input by voice, and the handwriting input which uses a handwriting recognition using selection with the arrow head, and speech recognition. In selection by the keyboard or the arrow head from 50 sound, the input is serious and must attach the key for it outside. And since the dictionary for kanji conversion is also needed, it will become a remarkable cost rise. In speech recognition and a handwriting input, although the input technique becomes easy, the dictionary for kanji conversion is needed and it becomes a cost rise. Moreover, in addition to there being a problem which was described above, in the case where an alphabetic data is sent apart from image data, the air time per picture image will increase only the part which sends an alphabetic data independently.

[0005] Moreover, when *****ing a picture image, an addressee must choose the picture image to file, and if it is performed while talking over the telephone, conversation will stop. Therefore, since there is image data hard to see etc. when it is going to file after a telephone call, how many sheets of that image data must be prepared, and selection tends to be performed from the inside. In this case, much memory which stores image data temporarily is needed, and it becomes a cost rise. And when adding alphabetic datas, such as a kanji, to this picture image to file, as mentioned above, 50 sound will be displayed on an input and a picture image from a keyboard, and it will come to perform from there the input according to voice using selection with the arrow head, and speech recognition, and the handwriting input which uses a handwriting recognition, and will become a cost rise steep as it is. When a small screen was also filed together and used the small screen at the time of reference, although the whole ambient atmosphere was found, it was [like / it was what carried out thinning out the whole screen at the time of a small screen creation etc., and was made small, and / the reduction version of a screen]

unclear whose face was reflected. this invention was made in view of the above-mentioned conventional technique, and makes it the technical problem that user-friendliness offers more the concerned equipment which enables it to tell a required information quickly well by the easy configuration as compared with the former in the voice and the picture image transmission equipment which can exchange information by the telephone call by voice, and transmission of a picture image.

[0006]

[The means for solving a technical problem] A transceiver means of voice and image data by which invention of a claim 1 is transmitted and received through voice and the I/O means of a picture, and a communication line, While it has the storage section of voice and the image data transmitted and received in the I/O signal of the aforementioned I/O means, and the aforementioned transceiver means In the voice and the picture image transmission equipment which has a processing means to perform processing of this I/O signal, or this voice and image data The picture camera and display unit which have the lens which can be close photographed as an I/O means of the aforementioned picture are used. the aforementioned processing means The data which compound the document informations, such as a card, and the graphic informations, such as a person image, which are acquired by close-up photography of the aforementioned picture camera, and constitute one screen in the aforementioned display unit are created. The data is transmitted, the informations and photographs of his face which were indicated by the telephone call partner point at the card, such as the telephone number, are transmitted, and it makes it possible to make an information to exchange.

[0007] It is enabled for invention of a claim 2 to store this received static image temporarily to the following reception, for example, to use it for execution of the following procedure of a filing in invention of a claim 1, while the aforementioned processing means uses as a static image the data which constitute the aforementioned synthetic screen.

[0008] Invention of a claim 3 is enabled to communicate by filing the aforementioned static image stored temporarily after the reception together with the identification code of the transmission origin of this static image in invention of a claim 2, and searching the filing.

[0009] It makes it possible to make to search by [as invention of a claim 4 is constituted in invention of a claim 3 by the picture image in which the aforementioned filing compounded the plurality of the picture image of only the aforementioned graphic information, and using it as display screen at the time of the aforementioned reference, for example, sampling only the fraction of a telephone call partner's face and being able to locate many sheets in a line in the picture image of only a face].

[0010]

[Gestalt of implementation of invention] Drawing 1 and drawing 3 are the block diagrams for explaining the enforcement gestalt of **** invention to the voice and the picture image transmission equipment of this application. In both drawings, there is a fraction constituted with the same element and the fraction is explained in common. Two kinds of lenses or a zoom lens can take lessons from cameras 1a and 1b, and it can photograph close, and it changes by the control from CPUs 11a and 11b, or is made as [change / the rate of a zoom ratio]. Display 2a and 2b displays the signal from 5a and 5b I/F block of picture image I/O. I/F block of picture image I/O, 5a and 5b digitize the analog video signal from cameras 1a and 1b, pass the memory control picture image synthesis blocks 7a and 7b, or digital picture data output from the memory control picture image synthesis blocks 7a and 7b is analog-ized, or change the signal to the video signal from cameras 1a and 1b, and are outputting it to display 2a and 2b. Moreover, it has OSD for displaying an easy character. In the memory control picture image synthesis blocks 7a and 7b, a format of the data is changed, and image data is incorporated in the incorporation memory in memory-block 6a and 6b, or it is sent [change a format, display memory is made to memorize the data from the image-processing sections 8a and 8b, and] to 5a and 5b I/F block of picture image I/O. [sending to the image-processing sections 8a and 8b] Moreover, work of doubling the picture image of two sheets is also performed here. The image-processing blocks 8a and 8b perform compression extension of image data. Earphones 3a and 3b are used at the time of transmission and reception of usual voice. In the speech processing blocks 9a and 9b, voice is changed into the analog signal from digital compressed data at compressed data digital from an analog signal. In the merge blocks 10a and 10b, the signal from image data, voice data, or CPU is compounded, 12a and 12b are passed I/F block of circuits, or the data from 12a and 12b are distributed to the image-processing blocks 8a and 8b, the speech processing blocks 9a and 9b, CPU11a, and 11b I/F block of circuits. By 12a and 12b, the interface with a public line network is carried out I/F block of circuits. The system is controlled by CPUs 11a and 11b. The key used for a usual telephone and the keys (storage, a card, archive, etc.) used by this invention are in the key stroke sections 4a and 4b, and it is prepared on the control panel with which a user operates it. Memory block 13a and 13b is the work memory of CPU, and saves the part and introduction data of image data which were received here. The storage 14 which is the element which is prepared in drawing 3 and is not in drawing 1 is large capacity storage which memorizes and saves the card image data which received.

[0011] The enforcement gestalt of claims 1 and 2 is explained based on drawing 5 which shows the configuration block view of drawing 1, and the flow chart of the operation. A photograph of a card is first taken by camera 1a shown in drawing 1. therefore, the key of card photography of a user of key stroke section 4a -- pushing (step S1) -- CPU11a which received the signal passes a signal to camera 1a, and a lens is changed, or the scale factor of a zoom is made close-up photography (step S2) next -- if it is O.K. while a user projects a card and looks at display 2a -- the button of "storage" -- pushing (step S3) -- the video signal inputted from camera 1a changes I/F block 5a of picture image I/O into the digital data of ** -- having -- memory control picture image synthesis block 7a -- a passage -- incorporation memory-block 6a -- memorizing -- having . CPU11a sends a signal to memory control picture image synthesis block 7a so that the picture image may always be displayed, and it passes data to I/F block 5a of picture image I/O. I/F block 5a of picture image I/O is passed, and data are changed into an analog signal, and are passed and displayed on display 2a.

[0012] next -- although a user makes a self-portrait memorize -- close-up photography of the card photography to the sake to a person -- **** -- like -- lens ***** (step S4) Since the field into which a picture image can be put will be limited when it is going to put a picture image into a card, some kinds like the field (1, 2, 3, 4) shown in drawing 2 in the field into which a self-portrait is put beforehand are prepared, a user chooses the fraction regarded as the best out of the some kinds (step S5), and a photograph of a self-portrait is taken there. A storage button is pushed, in order to see the picture image, and to memorize the picture image as introduction data, if it is O.K. (step S6). If it judges that it was pushed by the storage button, CPU11a takes out a signal so that the incorporation image data which set the self-portrait by the card picture image at memory control picture image synthesis block 7a may be passed to image-processing block 8a, in image-processing block 8a, will compress it and will pass it to CPU11a. The data is stored in memory-block 13a of introduction data in CPU11a (step S7). [0013] a transmitting side -- a user -- dispatch -- carrying out (step S11) -- a circuit -- being connected (step S12) -- first, CPU11a reads introduction data and passes them to merge block 10a. In merge block 10a, it compounds with the voice data which compressed the voice which entered from earphone 3a by speech processing block 9a, and is sent to a public line through I/F block 12a of circuits (step S13). In a receiving side, if a circuit is connected, the picture image of the card which a partner's self-portrait sent first attached will be separated with voice by merge block 10a, and only image data will be passed to image-processing block 8a and CPU11a. CPU11a holds it as received data (step S14). Extension processing of the image data passed to image-processing block 8a is carried out, and it is passed to memory control picture image synthesis block 7a. In memory control picture image synthesis block 7a, it is stored in the display memory of memory-block 6a temporarily, the data is passed to I/F block 5a of picture image I/O, and it displays by display 2a (step S15). Unless the user of a receiving side pushes a card button, CPU11a sends a signal to memory control picture image synthesis block 7a so that this picture image may be projected. The user of a receiving side looks at the picture image, and can check a partner's identifier and face. a card button -- pushing (step S16) -- although the rest receives a usual picture image -- once again -- a card button -- pushing (step S17) -- the card data in which the received data of CPU11a are stored are displayed, and even if it is all busy, the data can be checked repeatedly

[0014] Next, the enforcement gestalt of claims 3 and 4 is explained based on drawing 6 and drawing 7 which show the configuration block view of drawing 3, and the flow chart of the operation. With the enforcement gestalt of a claim 2, the card image data with a self-portrait sent to the beginning of a telephone call as mentioned above is held to the receiving data memory of memory block of CPU until the following telephone call starts. Although the storage 14 shown in drawing 3 is used when saving the card image data, the key of the archive by key stroke section 4b during [after talking over the telephone in that case] a telephone call is pushed (step S21). If it checks that the key of an archive has been pushed, CPU11b will issue designation to OSD of I/F block 5b of picture image I/O so that the cursor of the waiting for a telephone number input may be displayed as shown in drawing 4. Here, the telephone number of the telephone call partner who received with this means can be used by having a means to undergo the notice function of the telephone number of a public line network. Then, if a telephone call partner's telephone number which the user did in this way and got is inputted, CPU11b will issue [displaying the number corresponding to the inputted key on OSD, and] designation (step S22). a user -- it -- checking -- the key of an archive -- pushing (step S23) -- after relating the number inputted as the card image data which received, CPU11b concerned in ***** is doubled and is saved at storage 14 (step S24) Next, when this user sends, it searches so that the card image data with a self-portrait currently saved by storage 14 may be chosen out of a card file, and a file picture image is displayed (step S25). Then, if a dispatch button is pushed (step S26), CPU11b will read the telephone number data inputted together, and it will be sent to the partner point (step S27).

[0015] Next, based on drawing 7 which shows drawing 3 and an operation flow chart for the enforcement gestalt of a claim 4, the explanation is given to below. What is necessary is just to choose out of some kinds of locations with the enforcement gestalt of a claim 4, since it is beforehand decided as a self-portrait fraction is shown in drawing 2, when saving the card image data with a self-portrait sent as mentioned above. the key of an archive of the user of a receiving side -- pushing (step S31) -- CPU11b takes out designation to memory control picture image synthesis block 7b so that the display surrounding the decided frame may be carried out. In memory control picture image synthesis block 7b, the frame surrounding the decided fraction is created, and it is compounded to an indicative data, and it passes and displays on I/F block 5b of picture image I/O (step S32). A user moves a frame (step S33), a self-portrait fraction is specified, and if it is checked and the key of an archive of key stroke section 4b is pushed, CPU11b will issue designation so that a self-portrait fraction may be started and compressed from the card image data which is concerned in it and is contained in the display memory of memory-block 6b. The self-portrait cut down by memory control picture image synthesis block 7b is compressed through image-processing block 8a (step S34), and is passed to CPU11b. The card image data currently saved by memory from the first with the compressed self-portrait data (child screen data) by CPU11b is related, and it is saved to storage 14 (step S35). At the time of the following dispatch, when searching from storage 14 (step S36), CPU11b In order to take out and carry out compression extension only of the child screen data, send to image-processing block 8b, and it elongates. By memory control picture image synthesis block 7b, it points to the data so that a how many sheet kana poor picture image may be created for it. If it is displayed (step S37), it searches by carrying out like an album and a picture image is chosen out of the inside, the card image data of the picture image will be displayed (step S38), and a user will check and send it (step S39).

[0016]

[Effect of the invention] Since a transmitting person's face, an identifier, and the telephone number can be sent to an addressee by the picture image of one sheet according to the claim 1 or invention of 2, an addressee Neither a partner's face and identifier, nor the telephone number is known immediately, and it being confused on that spot and taking a memorandum one

by one, does not need to be lost, it becomes unnecessary to catch how the difficult kanji of an identifier is written, and conversation and information interchange are performed smoothly, and it is enabled to be early in agreement and to memorize a face and an identifier. Furthermore, in order to send a character as image data, implementation is possible, without becoming unnecessary to use the special means (handwriting input which displays 50 sound on an input and a screen from a keyboard, and uses the input by voice, and a handwriting recognition from there using selection with the arrow head, and speech recognition) for inputting a character, and needing a steep cost rise, and operation also becomes easy. According to the claim 3 or invention of 4, since a partner's card and face are filed together, reference becomes easy also in the state of uncertain storage -- only an identifier is known at the time of reference, or only a face is known -- and a partner comes to be found certainly. Moreover, since the data input at the time of a filing can be managed with minimum, it can be operated easily. Since only the fraction of the face compounded by some kinds of combination patterns and the face of a card is sampled, it considers as the picture image for reference of filing data as a small screen and it is made on a small screen, without processing thinning out a picture image from the first etc. Even if it can create a small screen only in the fraction of the face needed that there is nothing of a degradation of a picture image and it takes out a small screen at the time of reference, it is lost that a face is not clear anymore, and it becomes easy to carry out reference, and becomes correct.

[Translation done.]

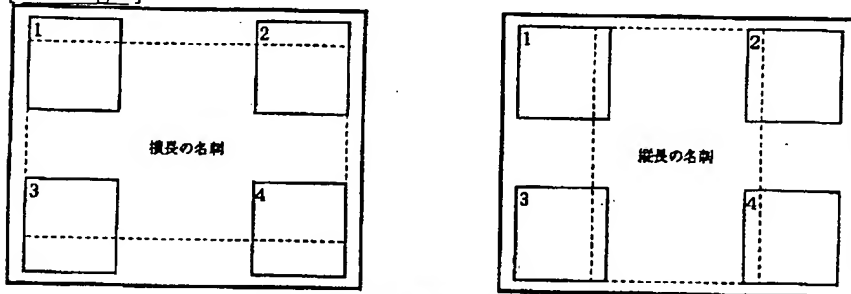
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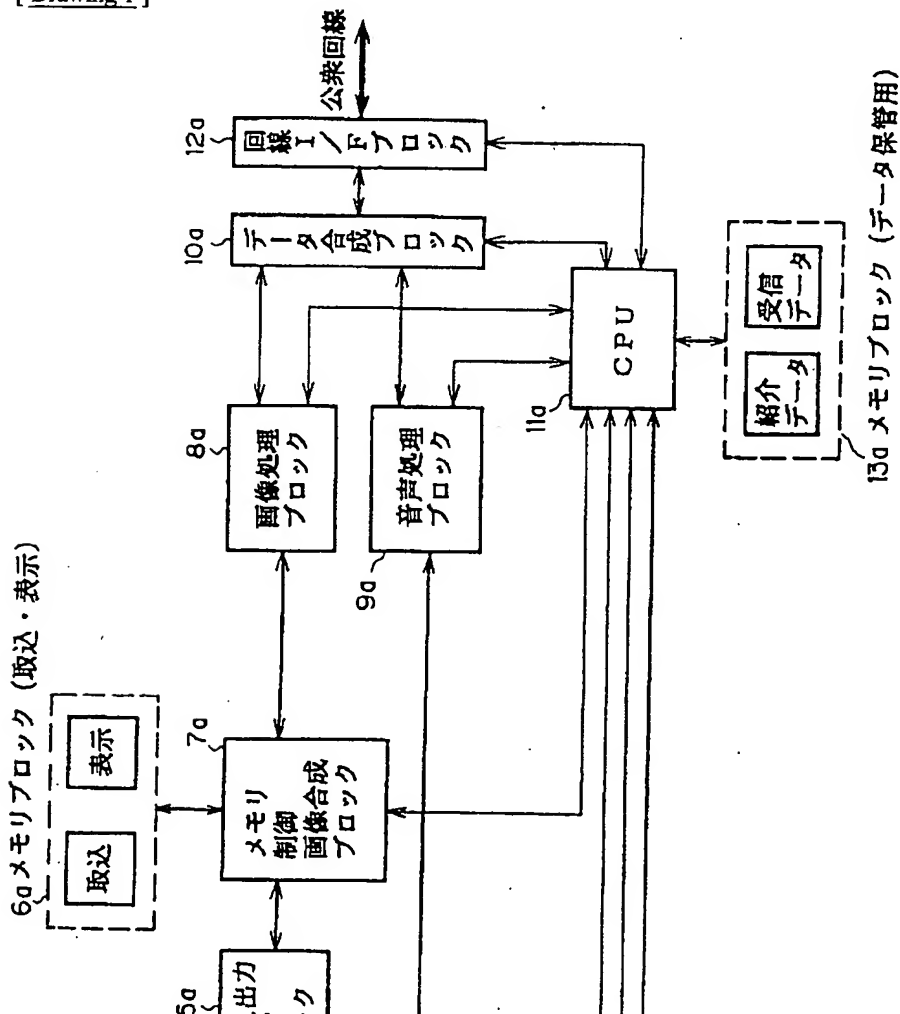
DRAWINGS

[Drawing 2]

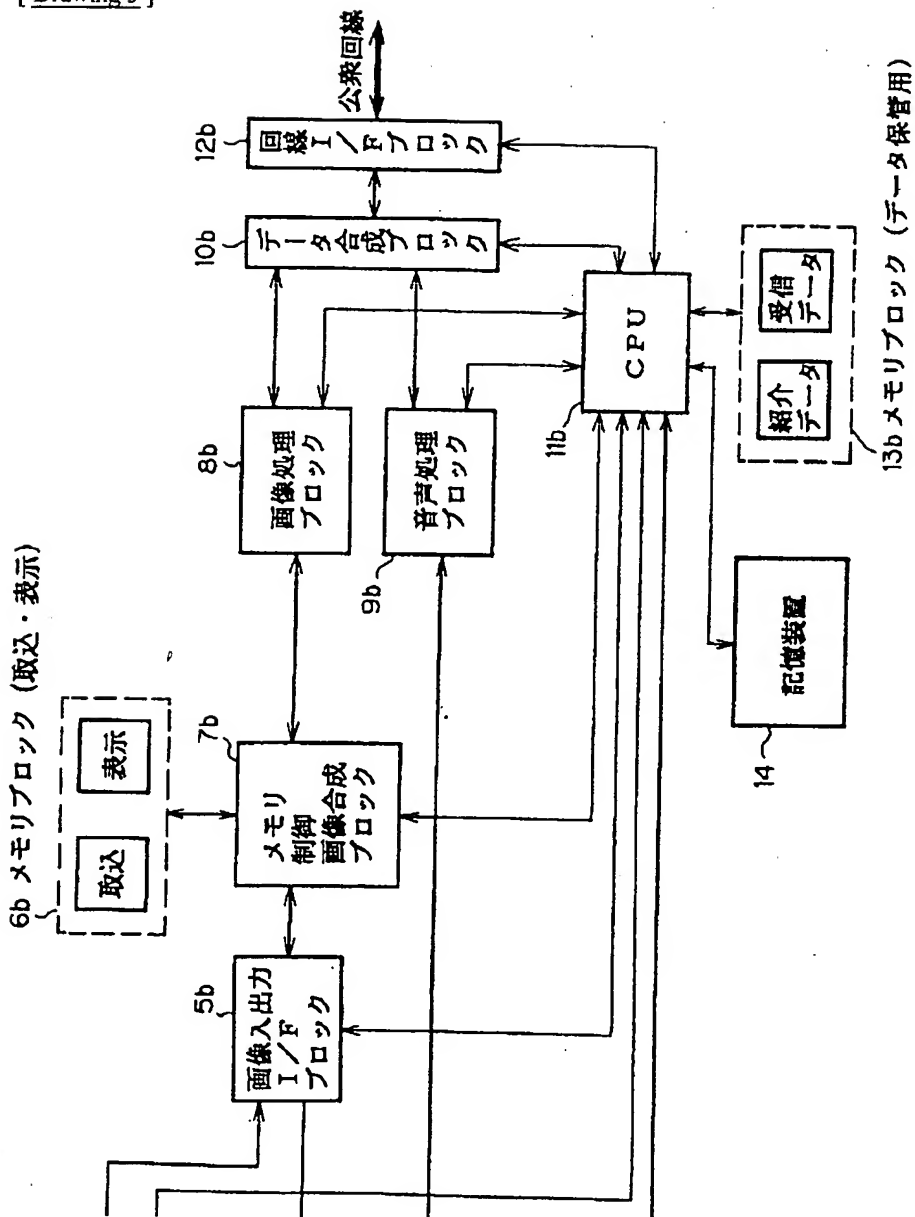


自画像を入れる領域 (1、2、3、4) の例

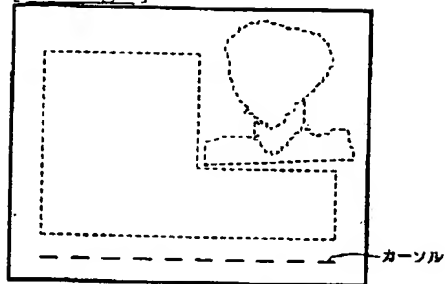
[Drawing 1]



[Drawing 3]

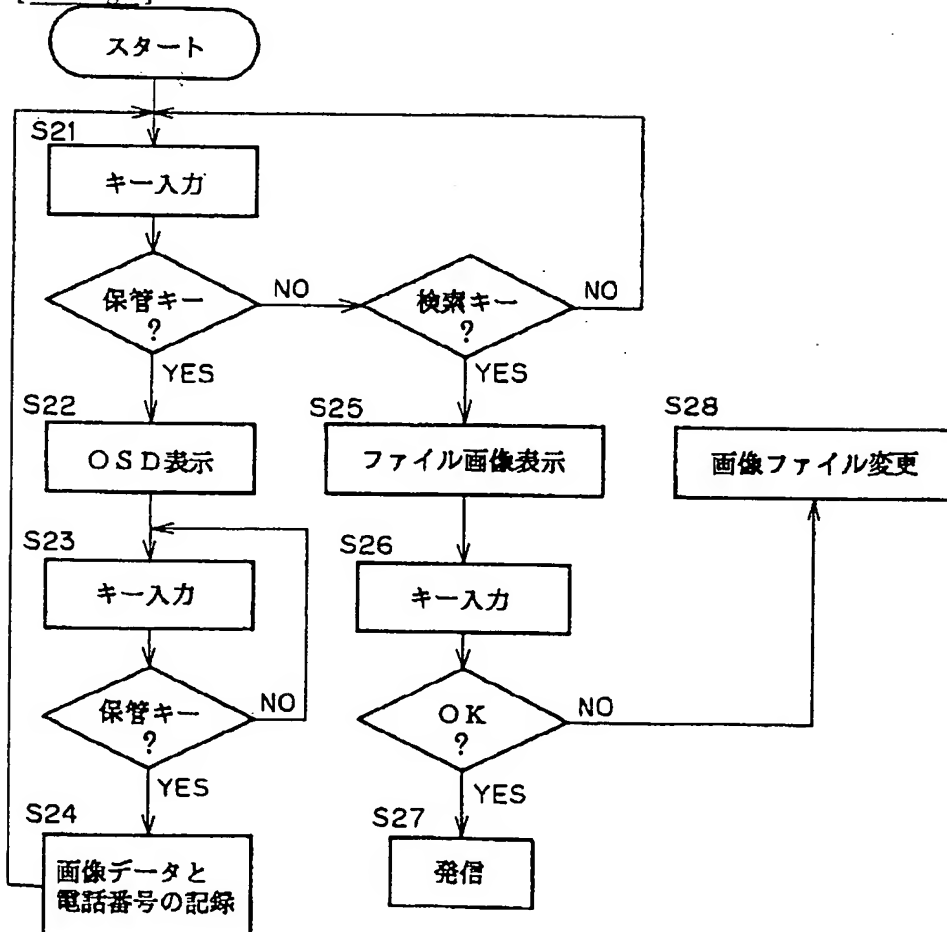


[Drawing 4]

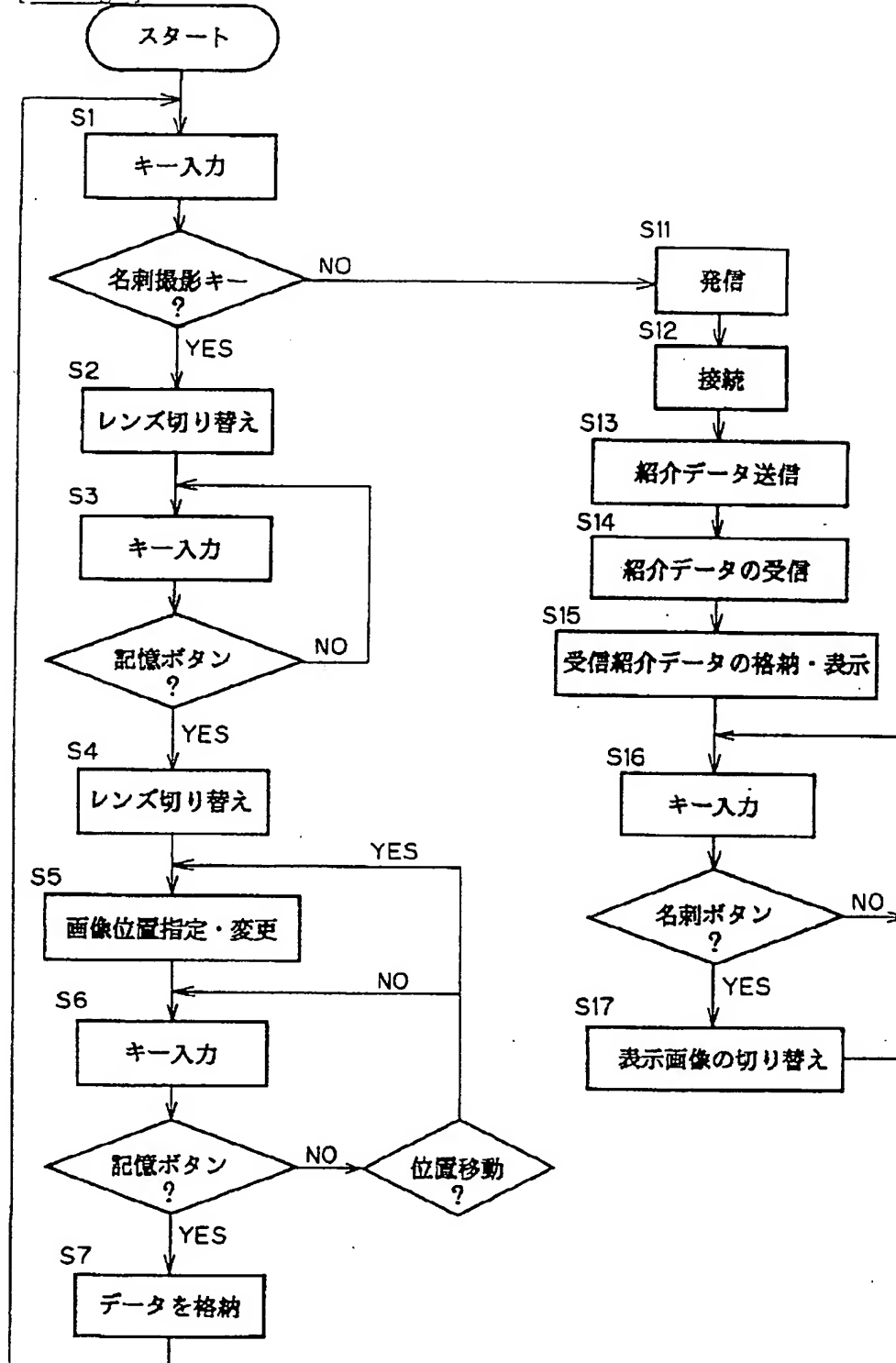


電話番号入力待ちの例

[Drawing 6]

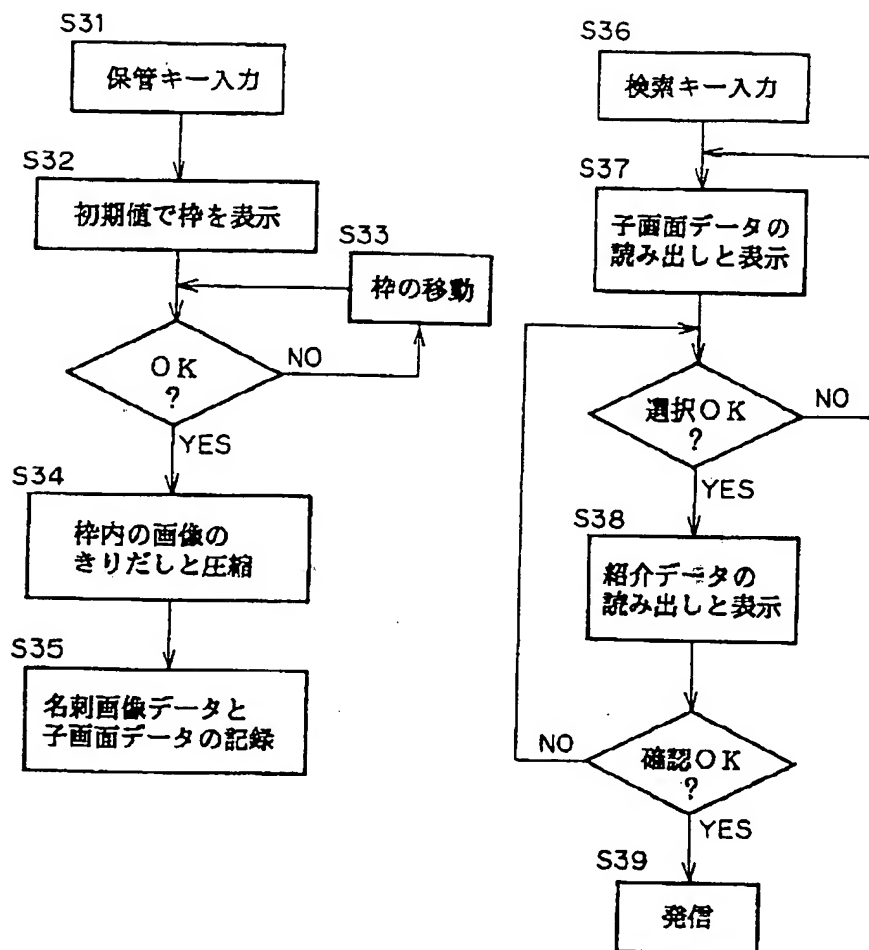


[Drawing 5]



本発明請求項1・2の動作の流れ図

[Drawing 7]



本発明請求項4の動作の流れ図

[Translation done.]

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DESCRIPTION OF DRAWINGS

[An easy explanation of a drawing]

[Drawing 1] It is a block diagram for explaining the enforcement gestalt of **** invention to the voice and the picture image transmission equipment of this application.

[Drawing 2] It is drawing showing the example of the field (1, 2, 3, 4) which puts a self-portrait into image data.

[Drawing 3] It is a block diagram for explaining the enforcement gestalt of **** invention to the voice and the picture image transmission equipment of this application.

[Drawing 4] It is drawing showing the example of the input screen of the waiting for a telephone number input.

[Drawing 5] It is a flow chart of operation in the enforcement gestalt of the claims 1 and 2 of this invention.

[Drawing 6] It is a flow chart of operation in the enforcement gestalt of the claim 3 of this invention.

[Drawing 7] It is a flow chart of operation in the enforcement gestalt of the claim 4 of this invention.

[An explanation of a sign]

1a, 1b [-- Earphone,] -- A camera, 2a, 2b -- Display, 3a, 3b 4a, 4b -- The key stroke section, 5a, 5b -- I/F block of picture image I/O, 6a, 6b, 13a, 13b -- Memory block, 7a, 7b -- Memory control picture image synthesis block, 8a, 8b [-- A merge block, 11a, 11b / -- CPU, 12a, 12b / -- I/F block of circuits, 14 / -- Storage.] -- An image-processing block, 9a, 9b -- A speech processing block, 10a, 10b

[Translation done.]